



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,797	03/10/2004	Alfred Max Chavez	415,100	5637
36040 7590 02/19/2008 MICHAEL A. SHIPPEY, PH. D. LAW OFFICES OF KARLA SHIPPEY 4848 LAKEVIEW AVENUE, SUITE E YORBA LINDA, CA 92886				
EXAMINER				
LOBO, IAN J				
ART UNIT		PAPER NUMBER		
3662				
MAIL DATE		DELIVERY MODE		
02/19/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,797

Applicant(s)

CHAVEZ ET AL.

Examiner

Ian J. Lobo

Art Unit

3662

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 28-33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-27 is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 20 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are still objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "28" has been used to designate both a conduit and a capacitor (see para. 0028). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Tabin ('067).

Tabin discloses an ultrasonic transducer assembly that includes a housing (21), an ultrasonic transducer (2) and a transformer (17).

4. Claims 1-5 and 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hare et al ('998).

Pert claims 1-4, Hare et al discloses an ultrasonic transducer assembly that includes a housing (38), an ultrasonic transducer (2), an acoustic block (4), an inductor or transformer (24), and a capacitor (30).

Per claim 5, see cyanoacrylate adhesive.

Per claim 14, see col. 3, lines 55-57.

Per claims 15-17 see Fig. 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 7, 10, 11, 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by the patent to Hands ('945) in view of Hare et al ('998).

Hands discloses an ultrasonic transducer assembly that includes a housing (30), an ultrasonic transducer (24) disposed within an interior of the housing and having an

active surface directed away from the housing interior, and an acoustic block (22). The structure claimed in claim 1 is anticipated by the structure disclosed in Hands.

The difference between claim 1 and the assembly of Hands is the claim now includes a transformer and at least one capacitor. Hands does not include such structure.

Hare et al teaches that a transformer and a capacitor are well known structural elements of an ultrasonic transducer and their inclusion within the housing of the ultrasonic transducer is also well known. Thus, in view of Hare et al, it would have been obvious to one of ordinary skill in the art to include a transformer and capacitor within the housing of the Hands transducer.

Per claim 7, see solid polyurethane elastomer (22).

Per claims 10 and 11, see cork mount (54).

Per claim 12, see epoxy (56).

Per claim 14, see col. 3, lines 9-11.

7. Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckert ('456) in view of Hare et al ('998).

Eckert discloses an ultrasonic transducer assembly that includes a housing (1), an ultrasonic transducer (2) disposed within an interior of the housing and having an active surface directed away from the housing interior, and an acoustic block (3).

The difference between claim 1 and the assembly of Eckert is the claim now includes a transformer and at least one capacitor. Eckert does not include such structure.

Hare et al teaches that a transformer and a capacitor are well known structural elements of an ultrasonic transducer and their inclusion within the housing of the ultrasonic transducer is also well known. Thus, in view of Hare et al, it would have been obvious to one of ordinary skill in the art to include a transformer and capacitor within the housing of the Eckert transducer.

Per claim 14, see col. 4, lines 1-6.

8. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Hare et al, Hands or Eckert in view of Grunert et al ('436).

The difference between claims 6-9 and the aforementioned ultrasonic transducer assemblies lies in the type of acoustic block used. However, in as much as phenolic and beryllium are well know acoustic blocks (see Grunert et al), it would have been obvious to one of ordinary skill in the art to have substituted either phenolic or beryllium for the acoustic blocks of Hands, Eckert or Hare et al.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hands ('945) in view of Hare et al ('998) as applied to claims 1-3 above, and further in view of Horner et al ('652).

It is noted that Horner et al teaches that a good resin filler used within the interior of an acoustic transducer housing is an epoxy with density lowering microballoons. To have further modified Hands to include density lowering microballoons with the epoxy of Hands would have been obvious to one of ordinary skill in the art.

10. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabin ('067) in view of Phillips ('677).

It is noted that Phillips teaches an equivalent electrical circuit for an ultrasonic transducer that includes a capacitor, primary winding of a transformer and secondary winding of the transformer. Thus, to have modified Tabin to include the equivalent electrical circuitry of Phillips would have been obvious to one of ordinary skill in the art in view of the reduced mass and higher power afforded.

Allowable Subject Matter

11. Claims 20 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Claims 25-27 are allowed.

Response to Arguments

13. Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian J. Lobo whose telephone number is (571) 272-6974. The examiner can normally be reached on Monday - Friday, 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ian J. Lobo/
Primary Examiner,
Art Unit 3662